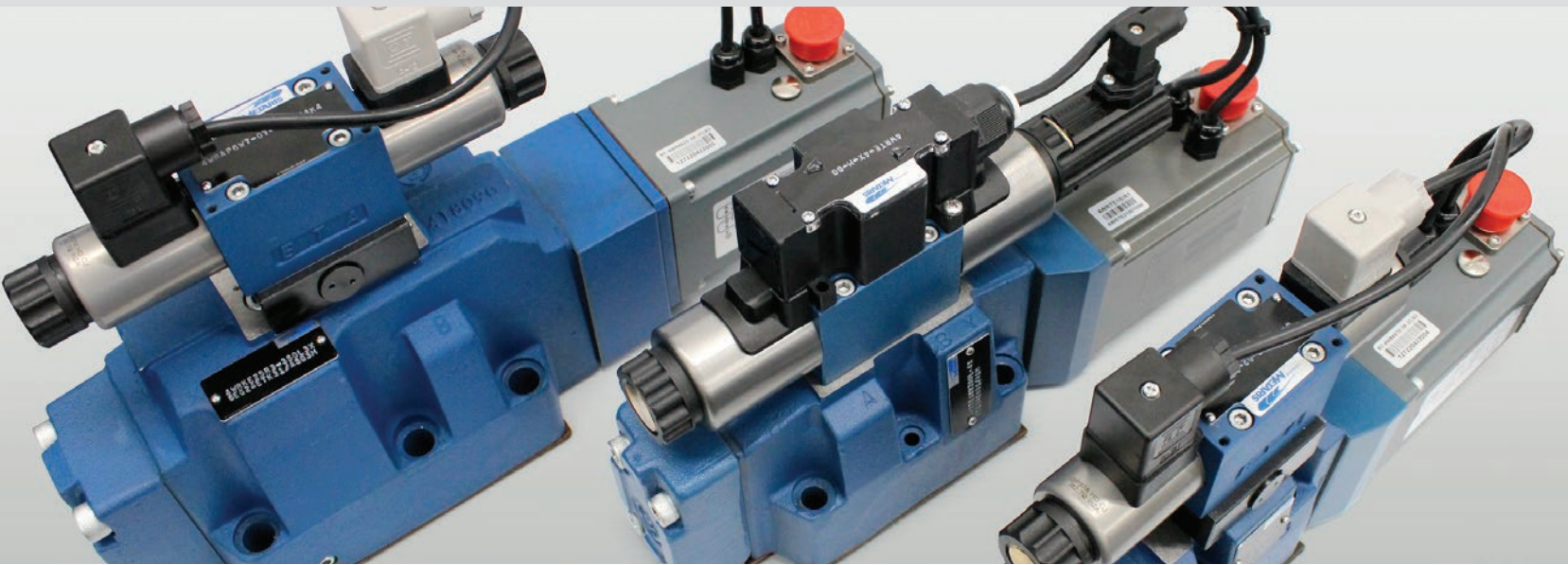


Genuine Metaris 4WRKE & 4WRTE Series Valves

Interchange Proportional Directional Control Valves



Pilot-operated Directional Control Valves with Electrical Position Feedback & Integrated Electronics

Our Genuine Metaris 4WRKE and 4WRTE Series Proportional Directional Valves are an interchangeable valve option for other manufacturers' industrial valves of the same fit, form & function. These are high performance valves that are very reliable, stable, and highly accurate due to their electrical position feedback design. These are excellent direct interchange options for Rexroth® 4WRKE and 4WRTE Series Directional Valves.

- Industrial-grade high performance valves
- Spring-centered main control spool
- Subplate mounting: porting pattern according to ISO 4401
- Automatic pressure compensation of the main stage by pilot control valve
- Valve sizes ranging from Size 10 to Size 35
- Maximum operating pressure of 3,045 - 5,080 psi (210 - 350 bar)
- Rated flow rate ranging from 6.6 - 264 gpm (25 - 1,000 L/min)
- Suitable for applications needing position, speed or pressure control
- Direct interchange option for Rexroth® 4WRKE & 4WRTE Series Valves



4WRKE Model Code Breakdown

4WRKE - ** - ** - *** - * - 3X/6E - G24 - ** - * - ** - D3 - *

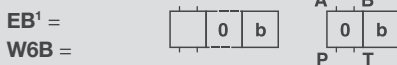
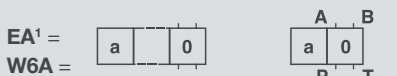
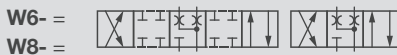
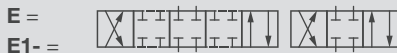
Series

4WRKE = Electrically operated 2-stage proportional directional valve in 4-way version with integrated electronics

Valve Size

10 = Size 10
16 = Size 16
25 = Size 25
27 = Size 27
32 = Size 32
35 = Size 35

Symbols



With symbol E1-, W8-:
 P → A : q_V B → T : $q_V/2$
 P → B : $q_V/2$ A → T : q_V

With symbol R, R3:
 P → A : q_V B → T : $q_V/2$
 P → B : $q_V/2$ A → T : q_V

Notice:

In the zero position, spools W6-, W8- and R3- have a connection from A to T and B to T with approx. 2% of the relevant nominal cross-section.

Seals

M = NBR Seals
V = FKM Seals

Pressure Reducing Valve

D3 = With pressure reducing valve ZDR 6 DP0-4X/40YM-W80 (non-adjustable)

Electronics Interface

C1 = Command value/actual value ±10 mA
A1⁴ = Command value/actual value ±10 V
F1 = Command value/actual value 4 to 20 mA

Electrical Connection

None/Omit = With connector according to DIN EN 175201-804

Pilot Oil Supply & Drain

None/Omit = Pilot oil supply external, pilot oil drain external
E = Pilot oil supply internal, pilot oil drain external
ET = Pilot oil supply internal, pilot oil drain internal
T = Pilot oil supply external, pilot oil drain internal

Supply Voltage

G24 = Direct voltage 24V

Solenoid

6E = Proportional Solenoid with detachable coil

Component Series

3X = Component Series 30 to 39 (30 to 39: Unchanged installation and connection dimensions)

Characteristic Curve Form

L = Linear
P = Linear with fine control range

Rated Flow

25² or 50³ or 100 = Size 10
125³ or 150³ or 200 or 220 = Size 16
220³ or 350 = Size 25
500 = Size 27
400 or 600 = Size 32
1000 = Size 35

¹ Spool with spool position "a" (P → B) ordering code **..EA..** or **W6A**
 Spool with spool position "b" (P → A) ordering code **..EB..** or **W6B**

² Only E and W6- available with characteristic curve form **L** (Linear)

³ Only E1- and W8- available with characteristic curve form **L** (Linear)

⁴ When replacing the component series 2X with component series 3X, the electronics interface is to be defined with **A5** (enable signal at pin C)

4WRTE Model Code Breakdown

4WRTE - * - ** - *** - *** - * - 4X/6E - G24 - ** - K31 - ** - *

Series

4WRTE = Electrically actuated 2-stage high response valve of 4-way design with integrated electronics (OBE)

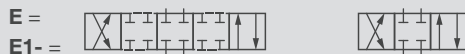
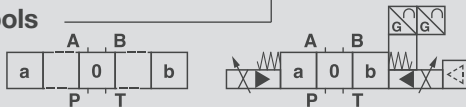
Spool Position Monitoring

None/Omit = Without spool position monitoring
M = With spool position monitoring (NG16 ... NG35 only)

Valve Size

10 = Size 10
16 = Size 16
25 = Size 25
27 = Size 27
32 = Size 32
35 = Size 35

Symbols



With symbol E1-, V1-, and W8-:

P → A : $q_{V \max}$ B → T : $q_{V/2}$
 P → B : $q_{V/2}$ A → T : $q_{V \max}$

Notice:

Representation according to DIN ISO 1219-1.
 Hydraulic interim positions are shown by dashes.

Rated Flow

25¹ (25l/min) or **50²** (50l/min) or **100** (90l/min) = Size 10
150³ (150l/min) or **220** (220l/min) = Size 16
220 (220l/min) or **350** (350l/min) = Size 25
500 (500l/min) = Size 27
400 (400l/min) or **600** (600l/min) = Size 32
1000 (1000l/min) = Size 35

Seals

M = NBR Seals
V = FKM Seals

Electronics Interface

A1 = Command value/actual value ± 10 V
F1 = Command value/actual value 4 to 20 mA
A5⁴ = Command value/actual value ± 10 V, enable signal (pin C)

Electrical Connection

K31 = Without mating connector; connector DIN EN 175201-804

Pilot Oil Supply & Drain

None/Omit = Pilot oil supply external, pilot oil drain external
E = Pilot oil supply internal, pilot oil drain external
ET = Pilot oil supply internal, pilot oil drain internal
T = Pilot oil supply external, pilot oil drain internal

Supply Voltage

G24 = Direct voltage 24V

Solenoid

6E = Proportional Solenoid with detachable coil (NG6)

Component Series

4X = Component Series 40 to 49 (40 to 49: Unchanged installation and connection dimensions)

Characteristic Curve Form

L = Linear
P = Linear with fine control range

¹ Symbol **E**, **W6-**, **W8-** and **V** only with characteristic curve form **L** (Linear)

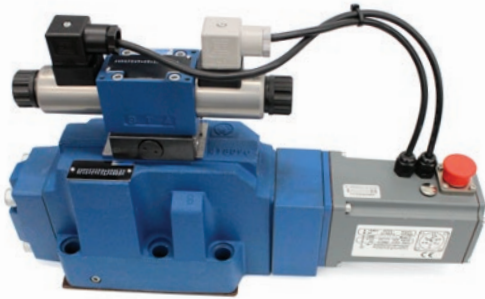
² Symbol **E1-**, **W8-** and **V1** only with characteristic curve form **L** (Linear)

³ Symbol **V1** only with characteristic curve form **L** (Linear)

⁴ When replacing the component series 3X by component series 4X, the electronics interface is to be defined with **A5** (enable signal at pin C)

Technical Data

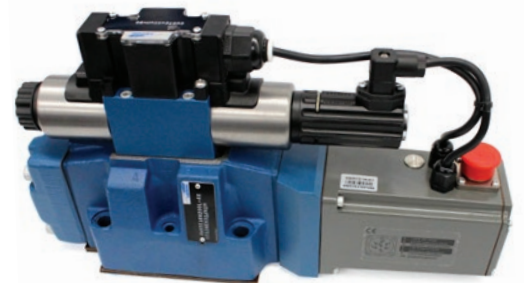
4WRKE SERIES



GENERAL	SIZE	10	16	25	27	32	35	
Operating pressure	Pilot control valve/oil supply	25 to 315 bar						
	Main valve connection P, A, B	Up to 315 bar	Up to 350 bar	Up to 350 bar	Up to 210 bar	Up to 350 bar	Up to 350 bar	
Return flow pressure	Connection T	Pilot oil drain, internal	Static < 10 bar (pilot control valve)					
		Pilot oil drain, external	Up to 315 bar	Up to 250 bar	Up to 250 bar	Up to 210 bar	Up to 250 bar	Up to 250 bar
	Connection Y	Static < 10 bar (pilot control valve)						
Recommended max. flow		170 l/min	460 l/min	870 l/min	1000 l/min	1600 l/min	3000 l/min	

4WRTE SERIES

GENERAL	SIZE	10	16	25	27	32	35	
Operating pressure	Pilot control valve/oil supply	25 to 315 bar						
	Main valve connection P, A, B	Up to 350 bar	Up to 350 bar	Up to 350 bar	Up to 270 bar	Up to 350 bar	Up to 350 bar	
Return flow pressure	Connection T	Pilot oil drain, internal	Static < 10 bar (pilot control valve)					
		Pilot oil drain, external	Up to 315 bar	Up to 250 bar	Up to 250 bar	Up to 210 bar	Up to 250 bar	Up to 250 bar
	Connection Y	Static < 10 bar (pilot control valve)						
Recommended max. flow		170 l/min	460 l/min	870 l/min	1000 l/min	1600 l/min	3000 l/min	



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